90-0023

Proposed Goals (version 3)

1. The standard will be based on the C++ Reference Manual (X3J16/90-0020) and the C Programming Language Standard (ANS X3.159-1989).

   The ISO C Standard will become an additional base document when available.

   The C++ Reference Manual will take precedence when the base documents disagree except where the committee decides otherwise.

2. Standardize the syntax and semantics of C++ programs expressed as a sequence of tokens without preprocessing directives.

   a. Select vocabulary involved in semantic and syntactic specifications.

   b. Resolve syntactic and semantic ambiguities and conflicts between the base documents.

   c. Provide formal specification of the syntax for C++.

3. Define and standardize a minimum set of C++ libraries, their contents, and interfaces.

   To provide a smooth migration path, the C++ libraries will be consistent with the ANSI C library.

   The proposed standard library will contain an I/O stream library as a minimum.

4. Standardize elements of a C++ environment. Issues include

   * preprocessing and lexical analysis
   * linkage
   * defining what it means to say that a given C++ implementation is compatible with a given C implementation
   * interaction with other languages
   * program startup and termination
   * differences between target and host environments
   * differences between freestanding and hosted implementations

5. Consider proposed major extensions to the base documents including parameterized types and exception handling.

6. Ensure that the X3J16 standard is suitable for the international community.

   X3J16 believes in producing a single standard for C++ which is acceptable both nationally and internationally. X3J16 will address all international issues as they are raised and will actively work to solicit members and commentary from the international community.

7. Ensure a very high level of compatibility with ANSI C.

   Complete compatibility is not a goal. Existing levels of

compatibility should be maintained. New incompatibilities with ANSI C should be rejected unless deemed necessary. Each incompatibility will be documented and justified.

8. Establish coordinating liaisons with X3J11 (ANSI C) and NCEG (Numerical C Extensions Group).

   These coordinating liaisons will provide directions for all three technical committees and help maintain inter-compatibility.

9. X3J16 will produce two deliverables: a draft proposed standard and a rationale.

   The rationale will consist of justifications for decisions made by X3J16.

   The standard will be written in English except for the formal grammar specification. This does not preclude work on a formal specification as an optional part of the standard.

10. Priorities:

    1) clear and unambiguous specification
    2) compatibility with the C++ Reference Manual
    3) compatibility with the other base documents
    4) consistency
    5) favorable user and implementor experience
    6) portability, efficiency, expressiveness
    7) ease of implementation including translatability into C